

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

WSOU INVESTMENTS, LLC d/b/a  
BRAZOS LICENSING AND  
DEVELOPMENT,

Plaintiff,

V.

Huawei Investment & Holding Co., Ltd.,  
Huawei Technologies Co., Ltd.,  
Huawei Technologies USA Inc.,  
Huawei Device Co. Ltd. (f/k/a Huawei  
Device (Dongguan) Co.),  
Huawei Device (Shenzhen) Co., Ltd. (f/k/a  
Huawei Device Co., Ltd.),  
Huawei Device USA, Inc.

CIVIL ACTION NO. 6:20-cv-190

## JURY TRIAL DEMANDED

# ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff WSOU Investments, LLC d/b/a Brazos Licensing and Development (“Brazos” or “Plaintiff”), by and through its attorneys, files this Complaint for Patent Infringement against Defendants Huawei Investment & Holding Co., Ltd., Huawei Technologies Co., Ltd., Huawei Technologies USA Inc., Huawei Device Co. Ltd. (f/k/a Huawei Device (Dongguan) Co.), Huawei Device (Shenzhen) Co., Ltd. (f/k/a Huawei Device Co., Ltd.), and Huawei Device USA, Inc. (collectively “Huawei” or “Defendants”) and alleges:

## NATURE OF THE ACTION

1. This is a civil action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. §§ 1, et seq., including §§ 271, 281, 284, and 285.

**THE PARTIES**

2. Brazos is a limited liability corporation organized and existing under the laws of Delaware, with its principal place of business at 605 Austin Ave, Ste 6, Waco, TX 76701.

3. On information and belief, Defendant Huawei Investment & Holding Co., Ltd. is a Chinese corporation that does business in Texas, directly or through intermediaries, with a principal place of business at Bantian, Longgang District, Shenzhen, 518129, People's Republic of China.

4. On information and belief, Defendant Huawei Technologies Co., Ltd. is a Chinese corporation that does business in Texas, directly or through intermediaries, with a principal place of business at Bantian, Longgang District, Shenzhen 518129, People's Republic of China.

5. Upon information and belief, Defendant Huawei Technologies USA Inc. is a corporation organized and existing under the laws of Texas that maintains an established place of business at 2391 NE Interstate 410 Loop, San Antonio, TX 78217. Huawei Technologies USA, Inc. is authorized to do business in Texas and may be served via its registered agent, CT Corporation System, 1999 Bryan Street, Suite 900, Dallas, Texas 75201-3136.

6. Upon information and belief, Defendant Huawei Device Co. Ltd. (formerly known as Huawei Device (Dongguan) Co.) is a Chinese corporation that does business in Texas, directly or through intermediaries, and maintains a principal place of business in No.2 of Xincheng Road, Songshan Lake Zone, Dongguan, Guangdong 523808, People's Republic of China.

7. Upon information and belief, Huawei Device (Shenzhen) Co., Ltd. (formerly known as Huawei Device Co., Ltd.) is a wholly-owned subsidiary of Defendant Huawei

Device Co. Ltd. is a Chinese corporation that does business in Texas, directly or through intermediaries, and maintains a principal place of business in Bantian, Longgang District, Shenzhen 518129, People's Republic of China.

8. On information and belief, Defendant Huawei Device USA, Inc., is a Texas corporation with a principal place of business located at 5700 Tennyson Parkway, Suite 600, Plano, Texas 75024. Huawei Device USA, Inc. is authorized to do business in Texas and may be served via its registered agent, CT Corporation System, 1999 Bryan Street, Suite 900, Dallas, Texas 75201-3136.

9. All of the Defendants operate under and identify with the trade name "Huawei." Each of the Defendants may be referred to individually as a "Huawei Defendant" and, collectively, Defendants may be referred to below as "Huawei" or as the "Huawei Defendants." Upon information and belief, Defendant Huawei Investment & Holding Co., Ltd. provides consolidated financial reporting for Huawei entities, including all Huawei Defendants.

#### **JURISDICTION AND VENUE**

10. This is an action for patent infringement which arises under the Patent Laws of the United States, in particular, 35 U.S.C. §§271, 281, 284, and 285.

11. This Court has jurisdiction over the subject matter of this action under 28 U.S.C. §§ 1331 and 1338(a).

12. This Court has specific and general personal jurisdiction over each Huawei Defendant pursuant to due process and/or the Texas Long Arm Statute, because each Huawei Defendant has committed acts giving rise to this action within Texas and within this judicial district. The Court's exercise of jurisdiction over each Huawei Defendant would not offend traditional notions of fair play and substantial justice because Huawei has established

minimum contacts with the forum. For example, on information and belief, Huawei Defendants have committed acts of infringement in this judicial district, by among other things, selling and offering for sale products that infringe the asserted patent, directly or through intermediaries, as alleged herein.

13. Venue in the Western District of Texas is proper pursuant to 28 U.S.C. §§1391(b), (c)(3), and 1400(b) because Huawei Technologies USA Inc. and Huawei Device USA Inc. have committed acts of infringement in this judicial district and have a regular and established places of business in this judicial district and in Texas. As non-limiting examples, on information and belief, Huawei Technologies USA Inc. and Huawei Device USA Inc. have sold or offered to sell the Accused Products in this judicial district and have employees or agents that operate Huawei equipment in this judicial district, including at 189 CR 265, Georgetown, TX 78626, 1150 S Bell Blvd, Cedar Park, TX 78613, 1399 S A W Grimes Blvd, Round Rock, TX 78664, 12335 IH 35, Jarrell, TX 76537, 1050 Rabbit Hill Rd, Unit #E, Georgetown, TX 78626, 1602 A W Grimes Blvd, Round Rock, TX 78664, 4120 IH 35 N, Georgetown, TX 78626, 900 CR 272, Leander, TX 78641, 1950 Crystal Falls Pkwy, Leander, TX 78641, 1101 N Industrial Blvd, Round Rock, TX 78681, 506 McNeil Rd, Round Rock, TX 78681, 3210 Chisholm Trail Rd, Round Rock, TX 78681, 112 Roundville Ln, Round Rock, TX 78664, 202 Central Dr W, Georgetown, TX 78628, 3595 E Hwy 29, Georgetown, TX 78626, 1402 W Welch St, Taylor, TX 76574, 3801 Oak Ridge Dr, Round Rock, TX 78681, 1957 Red Bud Ln #B, Round Rock, TX 78664, 6603 S Lakewood Dr, Georgetown, TX 78633, 500 W Front, Hutto, TX 78634.

**COUNT ONE - INFRINGEMENT OF**  
**U.S. PATENT NO. 7,487,240**

14. Brazos re-alleges and incorporates by reference the preceding paragraphs of this Complaint.

15. On February 3, 2009, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 7,487,240 (“the ’240 Patent”), entitled “Centralized internet protocol/multi-protocol label switching connectivity verification in a communications network management context.” A true and correct copy of the ’240 Patent is attached as Exhibit A to this Complaint.

16. Brazos is the owner of all rights, title, and interest in and to the ’240 Patent, including the right to assert all causes of action arising under the ’240 Patent and the right to any remedies for the infringement of the ’240 Patent.

17. Huawei makes, uses, sells, offers for sale, imports, and/or distributes in the United States, including within this judicial district, products such as, but not limited to, a Unified Network Management System that is used to manage transport, access, and IP equipment at both the network element (NE) layer and the network layer (collectively, the “Accused Products”).

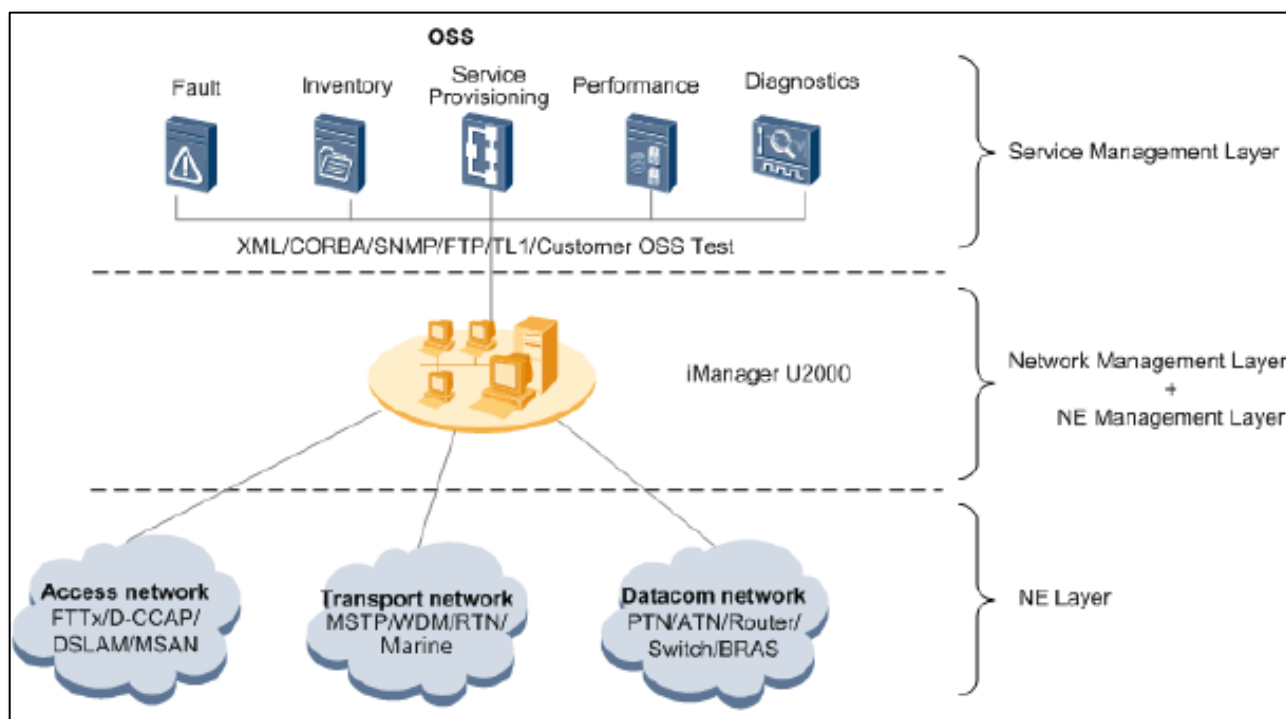
18. The Accused Products include the iManager U2000 Unified Network Management System (“U2000”).

19. The U2000 is an equipment management system developed by Huawei that provides management and network management functions.



<https://support.huawei.com/enterprise/us/management-system/imanager-u2000-pid-15315>.

20. The U2000 is a unified platform for managing access, transport, and IP NEs (*i.e.*, Network Elements).



[https://www.academia.edu/24507194/iManager\\_U2000\\_Unified\\_Network\\_Management\\_System\\_Product\\_Description\\_Issue\\_2.0](https://www.academia.edu/24507194/iManager_U2000_Unified_Network_Management_System_Product_Description_Issue_2.0).

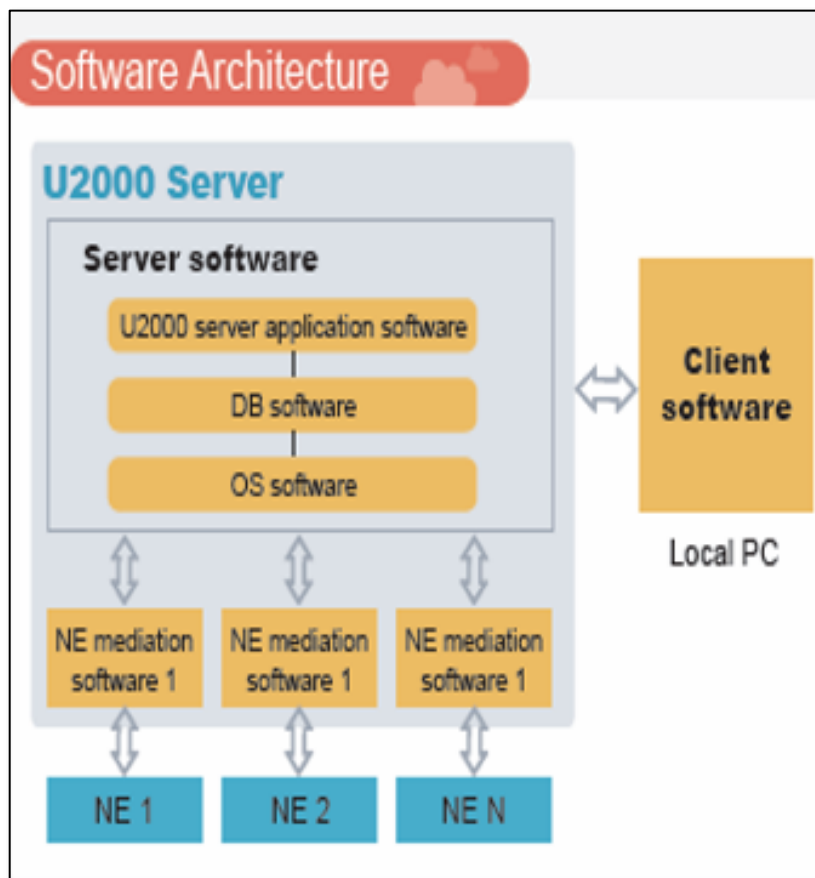
21. The U2000 provides a variety of detection and diagnostic methods to check service connectivity and locate faults.

Provides a variety of detection and diagnostic methods to quickly check service connectivity and locate faults, and supports service-based performance query, threshold pre-warning alarms, and trend analysis in the GUI.

[https://www.academia.edu/24507194/iManager\\_U2000\\_Unified\\_Network\\_Management\\_System\\_Product\\_Description\\_Issue\\_2.0](https://www.academia.edu/24507194/iManager_U2000_Unified_Network_Management_System_Product_Description_Issue_2.0).

22. The U2000 has a client/server architecture. In such an architecture, the client and the server communicate by means of a LAN or WAN. The U2000 server (*i.e.*, the connectivity verification server) communicates with managed NEs (*i.e.*, Network Elements)

in an inband or outband networking mode. The below shows the software architecture of the U2000.



<https://www.scribd.com/presentation/375371071/u2000-Oss-Nms>.

23. The U2000 provides performance monitoring functions (i.e., connectivity verification process) which applies to Access NEs, Router/ Switch NE and Transfer NE. By creating a performance instance, users can enable the NMS to collect performance data from network devices at specified intervals (or scheduled intervals).

NMS provides performance monitoring functions to support performance management at both the NE and network levels. This function is applicable to Access NE, Router/Switch NE and Transfer NE. By creating a performance instance, you can enable the NMS to collect performance data from network devices at specified intervals.

[https://www.academia.edu/24507194/iManager\\_U2000\\_Unified\\_Network\\_Management\\_System\\_Product\\_Description\\_Issue\\_2.0](https://www.academia.edu/24507194/iManager_U2000_Unified_Network_Management_System_Product_Description_Issue_2.0).

24. Monitoring instances enable the user to collect performance statistics (*i.e.*, connectivity verification process) on resources of specified equipment according to a preset monitoring template and schedule policy (*i.e.*, scheduling the performance monitoring).

instance collects statistics on only one resource. You can perform the following operations on the U2000:

- Create monitoring instances for resources, such as NEs, boards, ports, and links, and for the IP SLA of the PTN and third-party equipment.

[https://www.academia.edu/24507194/iManager\\_U2000\\_Unified\\_Network\\_Management\\_System\\_Product\\_Description\\_Issue\\_2.0](https://www.academia.edu/24507194/iManager_U2000_Unified_Network_Management_System_Product_Description_Issue_2.0)

25. The U2000 also has management functions at the element management layer and network management layer such as Topology Management, Alarm Management, Fault Diagnosis, Performance Management, etc. Performance Management function enables to monitor the performance of NEs (Network Elements) and therefore helps to detect faults in the network.

The performance of a network may deteriorate because of internal or external factors and faults may occur. To achieve good network performance for live networks and future networks while controlling costs, network planning and monitoring are necessary. In addition, network efficiency needs to be measured in terms of the throughput rate, resource usage, and error rate. The performance management function enables you to detect the deteriorating tendency in advance and solve the potential threats so that faults can be prevented. In addition, high-precision ( $10^6$ ) performance measurement based on service packets is implemented to collect performance indicators, including the packet loss rate, delay, and jitter.

[https://www.academia.edu/24507194/iManager\\_U2000\\_Unified\\_Network\\_Management\\_System\\_Product\\_Description\\_Issue\\_2.0](https://www.academia.edu/24507194/iManager_U2000_Unified_Network_Management_System_Product_Description_Issue_2.0)

26. A U2000 instance is a performance indicator associated with a resource. It gives a measure of the performance aspect of the monitored resource, for example, traffic, availability, CPU usage, etc.



**Instance:** A performance indicator is associated with a resource. It gives the measure of performance aspect of monitored resource, for example, traffic, availability, central processing unit (CPU) usage, and so on. It is calculated from the performance data collected from the monitored resource. A performance indicator has properties, such as the data type, precision value (only for float), maximum value, and minimum value.

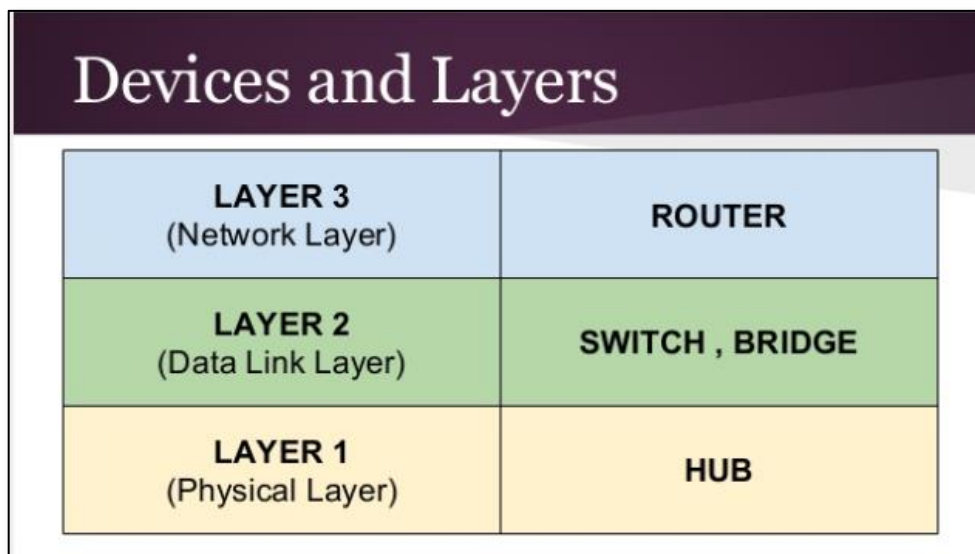
[https://www.academia.edu/24507194/iManager\\_U2000\\_Unified\\_Network\\_Management\\_System\\_Product\\_Description\\_Issue\\_2.0](https://www.academia.edu/24507194/iManager_U2000_Unified_Network_Management_System_Product_Description_Issue_2.0).

27. Monitoring instances enable the user to collect performance statistics (*i.e.*, connectivity verification process) on resources of specified equipment according to a preset monitoring template and schedule policy (*i.e.*, scheduling the performance monitoring).

instance collects statistics on only one resource. You can perform the following operations on the U2000:

- Create monitoring instances for resources, such as NEs, boards, ports, and links, and for the IP SLA of the PTN and third-party equipment.

[https://www.academia.edu/24507194/iManager\\_U2000\\_Unified\\_Network\\_Management\\_System\\_Product\\_Description\\_Issue\\_2.0](https://www.academia.edu/24507194/iManager_U2000_Unified_Network_Management_System_Product_Description_Issue_2.0)



<https://www.slideshare.net/NarendranThangarajan/a-primer-on-network-devices>,

28. The U2000 also provides performance monitoring functions (*i.e.*, connectivity verification process) which applies to Access Network Elements (NEs), Router/ Switch NE

(i.e., layer-2 and layer-3 objects in the network) and Transfer NE. By creating a performance instance, users can enable the NMS to collect performance data from network devices at specified intervals (or scheduled intervals).

NMS provides performance monitoring functions to support performance management at both the NE and network levels. This function is applicable to Access NE, Router/Switch NE and Transfer NE. By creating a performance instance, you can enable the NMS to collect performance data from network devices at specified intervals.

[https://www.academia.edu/24507194/iManager\\_U2000\\_Unified\\_Network\\_Management\\_System\\_Product\\_Description\\_Issue\\_2.0](https://www.academia.edu/24507194/iManager_U2000_Unified_Network_Management_System_Product_Description_Issue_2.0).

29. The U2000 provides performance thresholds such as Upper and Lower thresholds and Alarm thresholds for specific performance indicators.

**Setting performance thresholds.** This function allows you to set thresholds for specific performance indicators. The NMS also provides default global settings for batch configuration. You can set the following parameters:

- Upper and lower thresholds
- Alarm thresholds

[https://www.academia.edu/24507194/iManager\\_U2000\\_Unified\\_Network\\_Management\\_System\\_Product\\_Description\\_Issue\\_2.0](https://www.academia.edu/24507194/iManager_U2000_Unified_Network_Management_System_Product_Description_Issue_2.0).

30. U2000 uses a TCA (Threshold Crossing Alert) monitoring template to configure the thresholds. U2000 generates a TCA when the performance data exceeds the defined threshold in the TCA monitoring template.

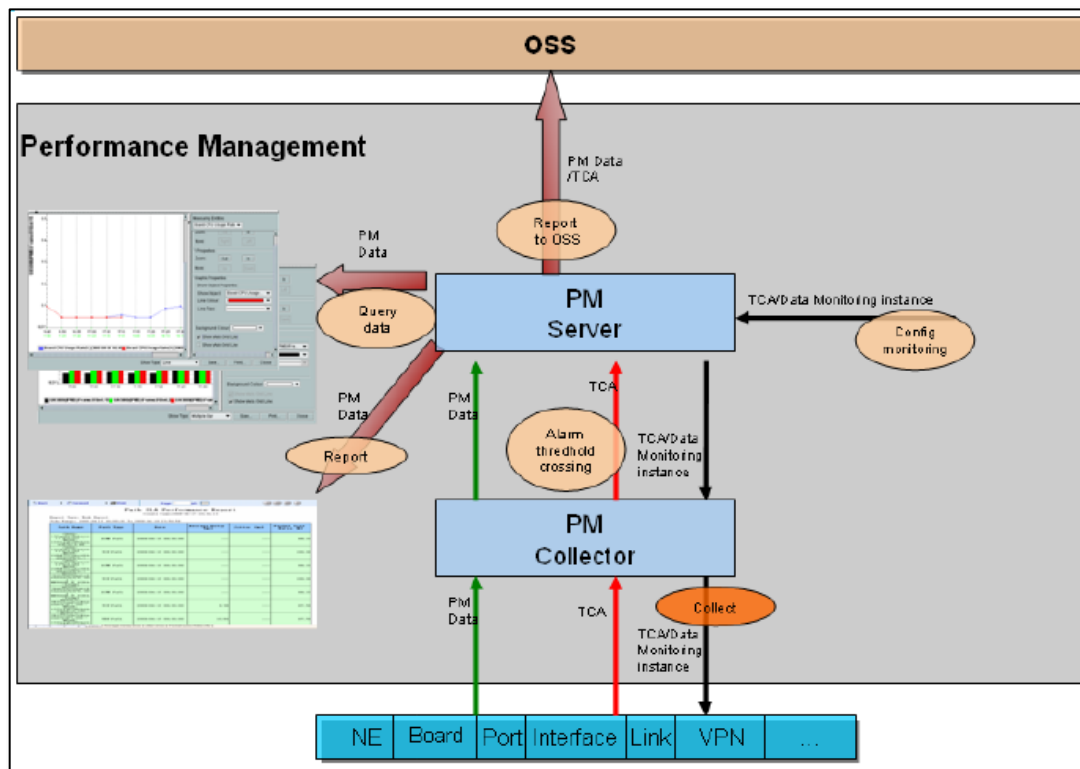
U2000 supports to set thresholds for performance, the U2000 uses TCA monitoring template to configure the thresholds. TCA monitoring template is a collection of indicators with specified thresholds. You can configure a TCA monitoring template for specified resources to monitor the TCAs of the resources. The U2000 generates a TCA when the performance data exceeds the defined threshold in the TCA monitoring template.

[https://www.academia.edu/24507194/iManager\\_U2000\\_Unified\\_Network\\_Management\\_System\\_Product\\_Description\\_Issue\\_2.0](https://www.academia.edu/24507194/iManager_U2000_Unified_Network_Management_System_Product_Description_Issue_2.0)

31. U2000 uses a graphical user interface (GUI) to monitor key network indicators and display statics on the collected performance data (*i.e.* the connectivity verification results).

The U2000 uses a graphical user interface (GUI) to monitor key network indicators and display statistics on the collected performance data.

[https://www.academia.edu/24507194/iManager\\_U2000\\_Unified\\_Network\\_Management\\_System\\_Product\\_Description\\_Issue\\_2.0](https://www.academia.edu/24507194/iManager_U2000_Unified_Network_Management_System_Product_Description_Issue_2.0).



[https://www.academia.edu/24507194/iManager\\_U2000\\_Unified\\_Network\\_Management\\_System\\_Product\\_Description\\_Issue\\_2.0](https://www.academia.edu/24507194/iManager_U2000_Unified_Network_Management_System_Product_Description_Issue_2.0)

32. When an exception occurs on a network, the U2000 notifies using alarms on time so that the network engineers can recover the network quickly.

Alarm management consists of the following functions:

- Network-wide alarm monitoring and remote alarm notification enable the U2000 to notify maintenance engineers of network exceptions in a timely manner so that the engineers can rectify faults quickly.
- Alarm correlation analysis, alarm association (with NEs, ports, or services), alarm masking, alarm suppression, alarm reversion, maintenance experience base, and configuration of alarm or event northbound filtering rules improve the accuracy and efficiency of alarm processing.
- Alarm synchronization ensures the reliability of alarms.
- Custom functions, such as alarm filtering, alarm redefinition, and time localization that can meet the requirements of different scenarios.

[https://www.academia.edu/24507194/iManager\\_U2000\\_Unified\\_Network\\_Management\\_System\\_Product\\_Description\\_Issue\\_2.0](https://www.academia.edu/24507194/iManager_U2000_Unified_Network_Management_System_Product_Description_Issue_2.0)

33. There are several categories of alarms, such as Communication alarms, Equipment alarms, Service alarms, etc. Service alarms refer to the alarms related to the service status and network QoS. For example, the multiplex section performance threshold-crossings, etc.

Equipment alarms: refer to the alarms related to equipment hardware. For example, the laser failure and the optical port loopback.

Service alarms: refer to the alarms related to the service status and network QoS. For example, the multiplex section performance threshold-crossings and the excessive B2 bit errors.

[https://www.academia.edu/24507194/iManager\\_U2000\\_Unified\\_Network\\_Management\\_System\\_Product\\_Description\\_Issue\\_2.0](https://www.academia.edu/24507194/iManager_U2000_Unified_Network_Management_System_Product_Description_Issue_2.0),

34. When items monitored by the U2000 are abnormal, the corresponding status icons turn red. When a value of the monitored item reaches the corresponding threshold, the system sends an alarm, and the corresponding status icon turns red.

When items monitored by the U2000 are abnormal, the corresponding status icons turn red. By default, the U2000 sets thresholds for certain monitored items such as the CPU usage and database usage. When a value of the monitored item reaches the corresponding threshold, the system sends an alarm and the corresponding status icon turns red. Users can modify the thresholds if necessary.

[https://www.academia.edu/24507194/iManager\\_U2000\\_Unified\\_Network\\_Management\\_System\\_Product\\_Description\\_Issue\\_2.0](https://www.academia.edu/24507194/iManager_U2000_Unified_Network_Management_System_Product_Description_Issue_2.0)

m\_Product\_Description\_Issue\_2.0

35. When a value of the monitored item reaches the corresponding threshold, the system sends an alarm, and the corresponding status icon turns red.

The U2000 provides a GUI-based system monitoring function. Users can view the service process status and resource usage (such as the CPU, memory, hard disks, and database) of the U2000 in real time, and learn the running status of all the components installed on the U2000 server.

When items monitored by the U2000 are abnormal, the corresponding status icons turn red. By default, the U2000 sets thresholds for certain monitored items such as the CPU usage and database usage. When a value of the monitored item reaches the corresponding threshold, the system sends an alarm and the corresponding status icon turns red. Users can modify the thresholds if necessary.

[https://www.academia.edu/24507194/iManager\\_U2000\\_Unified\\_Network\\_Management\\_System\\_Product\\_Description\\_Issue\\_2.0](https://www.academia.edu/24507194/iManager_U2000_Unified_Network_Management_System_Product_Description_Issue_2.0).

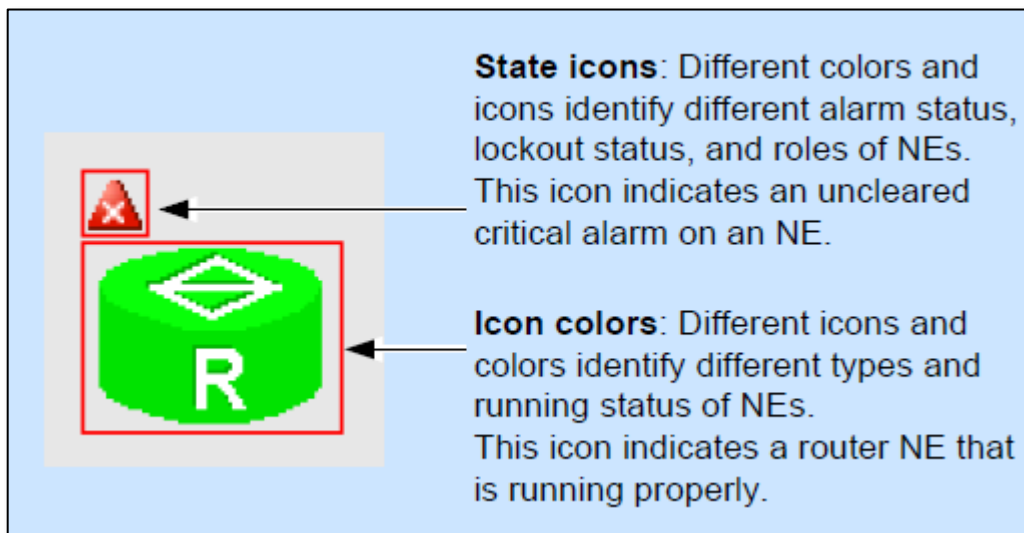
36. In the topology view, alarms are displayed in different colors or icons to indicate the different status of the subnets and Network Elements (NEs). The alarms are displayed with two methods: color-coded display and small icon display. Users can choose nodes of different levels from the Physical Root navigation tree (*i.e.*, the containment hierarchy) such as a subnet, a node, or a NE to browse current alarms.

37. A NE can be an Access NE, Router/Switch NE, etc. Hence, layer-2 and layer-3 objects in the containment hierarchy (*here*, the navigation tree in network topology) affected by connectivity verification results are identified and displayed in the network topology.

In the topology view, alarms are displayed in different colors or icons to indicate different status of the subnets and NEs. The alarms are displayed with two methods: color-coded display and small icon display. The default method is the color-coded display, as shown in Figure 7-7.

You can choose nodes of different levels from the Physical Root navigation tree such as a subnet, a node, or an NE to browse current alarms.

[https://www.academia.edu/24507194/iManager\\_U2000\\_Unified\\_Network\\_Management\\_System\\_Product\\_Description\\_Issue\\_2.0](https://www.academia.edu/24507194/iManager_U2000_Unified_Network_Management_System_Product_Description_Issue_2.0).



[https://www.academia.edu/24507194/iManager\\_U2000\\_Unified\\_Network\\_Management\\_System\\_Product\\_Description\\_Issue\\_2.0](https://www.academia.edu/24507194/iManager_U2000_Unified_Network_Management_System_Product_Description_Issue_2.0)

38. In view of preceding paragraphs, each and every element of at least claim 13 of the '240 Patent is found in the Accused Products.

39. Huawei has and continues to directly infringe at least one claim of the '240 Patent, literally or under the doctrine of equivalents, by making, using, selling, offering for sale, importing, and/or distributing the Accused Products in the United States, including within this judicial district, without the authority of Brazos.

40. Huawei has received notice and actual or constructive knowledge of the '240 Patent since at least the date of service of this Complaint.

41. Since at least the date of service of this Complaint, through its actions, Huawei has actively induced product makers, distributors, retailers, and/or end users of the Accused Products to infringe the '240 Patent throughout the United States, including within this judicial district, by, among other things, advertising and promoting the use of the Accused Products in various websites, including providing and disseminating product descriptions, operating manuals, and other instructions on how to implement and configure the Accused

Products. Examples of such advertising, promoting, and/or instructing include the documents at:

- <https://support.huawei.com/enterprise/us/management-system/imanager-u2000-pid-15315>
- [https://www.academia.edu/24507194/iManager\\_U2000\\_Unified\\_Network\\_Management\\_System\\_Product\\_Description\\_Issue\\_2.0](https://www.academia.edu/24507194/iManager_U2000_Unified_Network_Management_System_Product_Description_Issue_2.0)
- <https://www.slideshare.net/NarendranThangarajan/a-primer-on-network-devices>
- <https://www.scribd.com/presentation/375371071/u2000-Oss-Nms>

42. Since at least the date of service of this Complaint, through its actions, Huawei has contributed to the infringement of the '240 Patent by having others sell, offer for sale, or use the Accused Products throughout the United States, including within this judicial district, with knowledge that the Accused Products infringe the '240 Patent. The Accused Products are especially made or adapted for infringing the '240 Patent and have no substantial non-infringing use. For example, in view of the preceding paragraphs, the Accused Products contain functionality which is material to at least one claim of the '240 Patent.

#### **JURY DEMAND**

Brazos hereby demands a jury on all issues so triable.

#### **REQUEST FOR RELIEF**

WHEREFORE, Brazos respectfully requests that the Court:

- (A) Enter judgment that Huawei infringes one or more claims of the '240 Patent literally and/or under the doctrine of equivalents;
- (B) Enter judgment that Huawei has induced infringement and continues to induce infringement of one or more claims of the '240 Patent;



(C) Enter judgment that Huawei has contributed to and continues to contribute to the infringement of one or more claims of the '240 Patent;

(D) Award Brazos damages, to be paid by Huawei in an amount adequate to compensate Brazos for such damages, together with pre-judgment and post-judgment interest for the infringement by Huawei of the '240 Patent through the date such judgment is entered in accordance with 35 U.S.C. §284, and increase such award by up to three times the amount found or assessed in accordance with 35 U.S.C. §284;

(E) Declare this case exceptional pursuant to 35 U.S.C. §285; and

(F) Award Brazos its costs, disbursements, attorneys' fees, and such further and additional relief as is deemed appropriate by this Court.

Dated: March 16, 2020

Respectfully submitted,

/s/ James L. Etheridge

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***COUNSEL FOR PLAINTIFF***